

Claims as Renumbered
according to Rule 1.126

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of treating a subterranean formation comprising the steps of:

(a) placing a tackifying composition into the subterranean formation so as to form a coating on one or more particulates present in the subterranean formation, wherein the one or more particulates were present in the subterranean formation prior to the placement of the tackifying composition therein; and,

(b) placing an after-flush fluid into the subterranean formation.

2. (Original) The method of claim 1 further comprising, before step (a), the step of: placing a pre-flush fluid into the subterranean formation.

3. (Currently Amended) The method of claim 2 wherein the pre-flush fluid comprises an aqueous liquid selected from the group consisting of fresh water, salt water, brine, seawater, ~~or~~ and combinations thereof.

4. (Original) The method of claim 2 wherein the pre-flush fluid further comprises a surfactant.

5. (Currently Amended) The method of claim ~~[[7]]~~ 4 wherein the surfactant ~~further comprises~~ is selected from the group consisting of an ethoxylated nonyl phenol phosphate

ester[[s]], a cationic surfactant[[s]], a non-ionic surfactant[[s]], an alkyl phosphonate surfactant, and ~~or~~ a combinations thereof.

6. (Currently Amended) The method of claim 1 wherein the tackifying composition comprises a ~~tackyfier~~ tackifier.

7. (Currently Amended) The method of claim 6 wherein the ~~tackyfier~~ comprises tackifier is selected from the group consisting of a polyamide, a polyester, a polycarbonate, polycarbamate, a natural resin, and ~~or~~ a combinations thereof.

8. (Original) The method of claim 1 wherein the tackifying composition further comprises a solvent.

9. (Currently Amended) The method of claim 8 wherein the solvent ~~comprises is~~ selected from the group consisting of butylglycidyl ether, dipropylene glycol methyl ether, butyl bottom alcohol, dipropylene glycol dimethyl ether, dimethyl formamide, diethyleneglycol methyl ether, ethyleneglycol butyl ether, methanol, butyl alcohol, isopropyl alcohol, diethyleneglycol butyl ether, propylene carbonate, d'limonene, 2-butoxy ethanol, butyl acetate, furfuryl acetate, butyl lactate, dimethyl sulfoxide, dimethyl formamide, a fatty acid methyl ester[[s]], and ~~or~~ combinations thereof.

10. (Original) The method of claim 1 wherein the viscosity of the tackifying composition is less than about 100 cP.

11. (Currently Amended) The method of claim 1 wherein the percent active ~~tackifier~~ tackifier in the tackifying composition is from about 1% to about 10%.

12. (Currently Amended) The method of claim 1 wherein the after-flush fluid comprises an aqueous liquid selected from the group consisting of fresh water, salt water, brine, seawater, ~~or~~ and combinations thereof.

13. (Original) The method of claim 1 wherein the after-flush fluid further comprises a surfactant.

14. (Currently Amended) The method of claim ~~12~~ 13 wherein the surfactant ~~further comprises~~ is selected from the group consisting of an ethoxylated nonyl phenol phosphate ester[[s]], a cationic surfactant[[s]], a non-ionic surfactant[[s]], an alkyl phosphonate surfactant, and ~~or~~ a combinations thereof.

15. (Original) The method of claim 2 where in the pre-flush fluid is placed into the subterranean formation at a matrix flow rate.

16. (Original) The method of claim 1 where in the tackifying composition is placed into the subterranean formation at a matrix flow rate.

17. (Original) The method of claim 1 where in the after-flush fluid is placed into the subterranean formation at a matrix flow rate.

18. (Currently Amended) A method of controlling fines migration in a subterranean formation comprising the steps of:

(a) placing a tackifying composition into the subterranean formation so as to form a coating on one or more particulates present in the subterranean formation, wherein the one or more particulates were present in the subterranean formation prior to the placement of the tackifying composition therein; and,

(b) placing an after-flush fluid into the subterranean formation.

19. (Original) The method of claim 18 further comprising, before step (a), the step of:

placing a pre-flush fluid into the subterranean formation.

20. (Currently Amended) The method of claim 19 wherein the pre-flush fluid comprises an aqueous liquid selected from the group consisting of fresh water, salt water, brine, seawater, ~~or~~ and combinations thereof.

21. (Original) The method of claim 19 wherein the pre-flush fluid further comprises a surfactant.

22. (Currently Amended) The method of claim 21 wherein the surfactant ~~further comprises~~ is selected from the group consisting of an ethoxylated nonyl phenol phosphate ester[[s]], a cationic surfactant[[s]], a non-ionic surfactant[[s]], an alkyl phosphonate surfactant, and ~~or a combinations thereof.~~

23. (Currently Amended) The method of claim 18 wherein the tackifying composition comprises a ~~tackifier~~ tackifier.

24. (Currently Amended) The method of claim 23 wherein the ~~tackifier comprises~~ tackifier is selected from the group consisting of a polyamide, a polyester, a polycarbonate, polycarbamate, a natural resin, and ~~or a combinations thereof..~~

25. (Original) The method of claim 18 wherein the tackifying composition further comprises a solvent.

26. (Currently Amended) The method of claim 25 wherein the solvent ~~comprises~~ is selected from the group consisting of butylglycidyl ether, dipropylene glycol methyl ether, butyl bottom alcohol, dipropylene glycol dimethyl ether, dimethyl formamide, diethyleneglycol methyl ether, ethyleneglycol butyl ether, methanol, butyl alcohol, isopropyl alcohol, diethyleneglycol butyl ether, propylene carbonate, d'limonene, 2-butoxy ethanol, butyl acetate, furfuryl acetate, butyl lactate, dimethyl sulfoxide, dimethyl formamide, a fatty acid methyl ester[[s]], ~~or~~ and combinations thereof.

27. (Original) The method of claim 18 wherein the viscosity of the tackifying composition is less than about 100 cP.

28. (Currently Amended) The method of claim 18 wherein the percent active ~~tackifier~~ tackifier in the tackifying composition is from about 1% to about 10%.

29. (Currently Amended) The method of claim 18 wherein the after-flush fluid comprises an aqueous liquid selected from the group consisting of fresh water, salt water, brine, seawater, ~~or~~ and combinations thereof.

30. (Original) The method of claim 18 wherein the after-flush fluid further comprises a surfactant.

31. (Currently Amended) The method of claim 30 wherein the surfactant ~~further~~ is selected from the group consisting of an ethoxylated nonyl phenol phosphate ester[[s]], a cationic surfactant[[s]], a non-ionic surfactant[[s]], an alkyl phosphonate surfactant, and ~~or~~ a combinations thereof.

Rule 1.126 32 ~~33~~ (Original) The method of claim 19 where in the pre-flush fluid is placed into the subterranean formation at a matrix flow rate.

33 ~~34~~ (Original) The method of claim 18 where in the tackifying composition is placed into the subterranean formation at a matrix flow rate.

~~34~~ ~~35~~. (Original) The method of claim 18 where in the after-flush fluid is placed into the subterranean formation at a matrix flow rate.

~~35~~ ~~36~~. (New) The method of claim 1 wherein the one or more particulates are selected from the group consisting of formation sand, proppant, and combinations thereof.

~~36~~ ~~37~~. (New) The method of claim 1 wherein the coating formed on the one or more particulates is a non-hardening coating.

~~37~~ ~~38~~. (New) The method of claim 1 wherein the coating covers 100% of the outer surface of the one or more particulates.

~~38~~ ~~39~~. (New) The method of claim 18 wherein the one or more particulates are selected from the group consisting of formation sand, proppant, and combinations thereof.

~~39~~ ~~40~~. (New) The method of claim 18 wherein the coating formed on the one or more particulates is a non-hardening coating.

~~40~~ ~~41~~. (New) The method of claim 18 wherein the coating covers 100% of the outer surface of the one or more particulates.